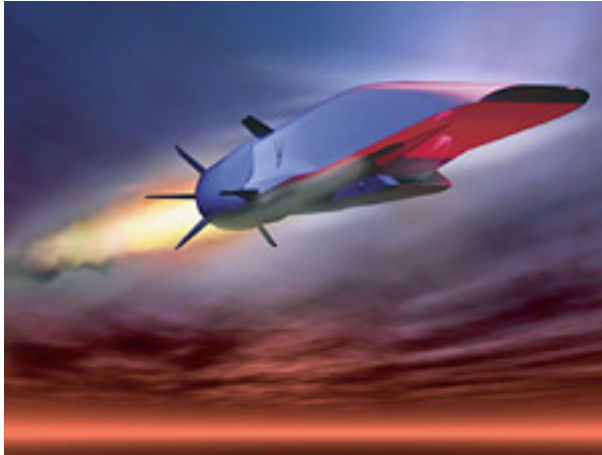


X-51A Makes Longest Scramjet Flight

Written by Larry Nelson

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X-51A, artist's concept. Credit: NASA

An engine first validated in a NASA wind tunnel successfully made the longest supersonic combustion ramjet-powered hypersonic flight to date off the southern California coast on May 26.

The air-breathing scramjet engine, built by Pratt & Whitney Rocketdyne, burned for more than 200 seconds to accelerate the U.S. Air Force's X-51A vehicle to Mach 5, or five times the speed of sound. It broke the previous record for the longest scramjet burn in a flight test, set by NASA's X-43 vehicle.

Air Force officials called the test -- the first of four planned -- an unqualified success. The flight is considered the first use of a practical hydrocarbon-fueled scramjet in flight. The X-51A launched from Edwards Air Force Base in California, carried aloft under the left wing of an Air Force Flight Test Center B-52 Stratofortress. It was released while the B-52 flew at 50,000 feet over the Pacific Ocean Point Mugu Naval Air Warfare Center Sea Range. After release, an Army Tactical Missile solid rocket booster accelerated the X-51A to about Mach 4.8 before it and a connecting interstage were jettisoned. The launch and separation were normal, according to Brink.